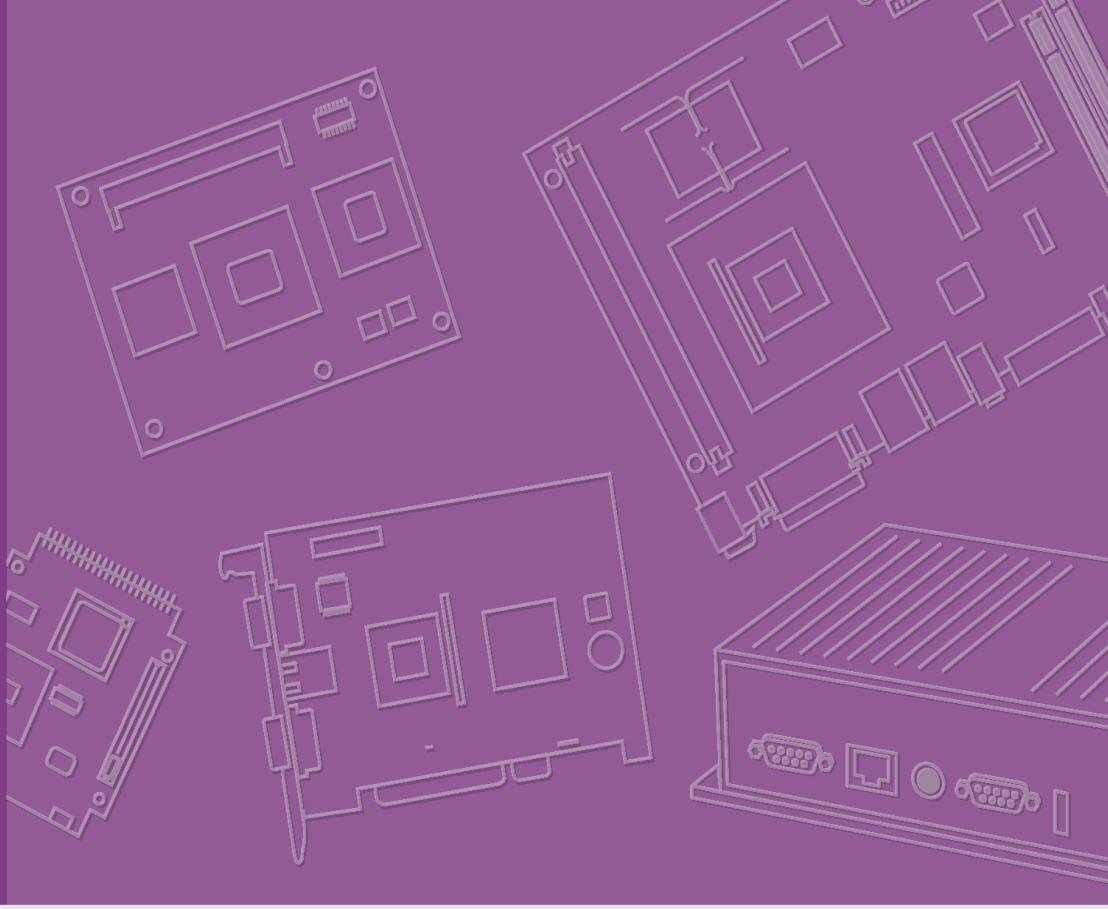


User Manual

ITM-5115 Series

15" Industrial LED Touch Monitor

ADVANTECH

Enabling an Intelligent Planet

Copyright

The documentation and the software included with this product are copyrighted 2011 by Advantech Co., Ltd. All rights are reserved. Advantech Co., Ltd. reserves the right to make improvements in the products described in this manual at any time without notice. No part of this manual may be reproduced, copied, translated or transmitted in any form or by any means without the prior written permission of Advantech Co., Ltd. Information provided in this manual is intended to be accurate and reliable. However, Advantech Co., Ltd. assumes no responsibility for its use, nor for any infringements of the rights of third parties, which may result from its use.

Acknowledgements

Intel and Pentium are trademarks of Intel Corporation.

Microsoft Windows and MS-DOS are registered trademarks of Microsoft Corp.

All other product names or trademarks are properties of their respective owners.

Product Warranty (2 years)

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
3. If your product is diagnosed as defective, obtain an RMA (return merchandize authorization) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Part Number: 2006511501 Edition 1

Printed in Taiwan March 2011

Declaration of Conformity

CE

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This kind of cable is available from Advantech. Please contact your local supplier for ordering information.

CE

This product has passed the CE test for environmental specifications. Test conditions for passing included the equipment being operated within an industrial enclosure. In order to protect the product from being damaged by ESD (Electrostatic Discharge) and EMI leakage, we strongly recommend the use of CE-compliant industrial enclosure products.

FCC Class A

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FM

This equipment has passed the FM certification. According to the National Fire Protection Association, work sites are classified into different classes, divisions and groups, based on hazard considerations. This equipment is compliant with the specifications of Class I, Division 2, Groups A, B, C and D indoor hazards.

Technical Support and Assistance

1. Visit the Advantech website at http://support.advantech.com where you can find the latest information about the product.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
   - Product name and serial number
   - Description of your peripheral attachments
   - Description of your software (operating system, version, application software, etc.)
   - A complete description of the problem
   - The exact wording of any error messages

Warnings, Cautions and Notes

Warning! *Warnings indicate conditions, which if not observed, can cause personal injury!*

Caution! *Cautions are included to help you avoid damaging hardware or losing data. e.g.*

There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Note! *Notes provide optional additional information.*

Document Feedback

To assist us in making improvements to this manual, we would welcome comments and constructive criticism. Please send all such - in writing to: support@advantech.com

Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by service personnel:
    - The power cord or plug is damaged.
    - Liquid has penetrated into the equipment.
    - The equipment has been exposed to moisture.
    - The equipment does not work well, or you cannot get it to work according to the user's manual.
    - The equipment has been dropped and damaged.
    - The equipment has obvious signs of breakage.
15. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.
16. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).

DISCLAIMER: This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

Caution! *For power adapter selection: the information about the adapter output rating (12 Vdc, 5 A min, or 18 W min) is provided in the user manual for user's selection if the power adapter is not shipped with the unit*

Contents

Chapter 1 Overview 1

1.1 Introduction 2
1.2 Features 2
1.3 Applications 2
1.4 Product Photos 3
1.5 Naming Rule 6

Chapter 2 System Setup 7

2.1 Specifications 8
2.2 Dimensions 9
Figure 2.1 ITM-5115R M Series Dimensions 9
Figure 2.2 ITM-5115R L Series Dimensions 9
Figure 2.3 ITM-5115R C Series Dimensions 10
Figure 2.4 ITM-5115R P Series Dimensions 10
2.3 Panel Mount Assembly SOP 11
2.4 Cable Clamp 12
2.5 Accessory Packing 12

Chapter 3 Touchscreen 13

3.1 OSD Functions (ITM-5115R-M Series Only) 14
3.1.1 OSD Main Menu: Push the MENU Key 14
3.1.2 Select Input Source 15
3.1.3 Contrast/Brightness - Submenu 15
3.1.4 Geometry Menu 16
3.1.5 Color Temperature - Submenu 16
3.1.6 RGB Color - Submenu 17
3.1.7 Language - Submenu 17
3.1.8 OSD Manager - Submenu 18
3.1.9 Auto Config - Submenu 18
3.1.10 Mode Information - Submenu 19
3.1.11 Memory Recall - Submenu 19
3.1.12 Exit Menu - Submenu 20
3.1.13 OSD Lock 20
3.2 Touch Drivers 20

Appendix A Troubleshooting 21

A.1 Introduction 22
A.2 Troubleshooting 22

Chapter 1

Overview

Sections include:

- Introduction
- Features
- Applications
- Product Photos
- Naming Rule

1.1 Introduction

The Advantech ITM-5115 is a brand new Industrial Touch Monitor, designed to meet the needs of customers who want quick and easy integrations with Advantech Embedded Box Computers, like ARK, and DSA. Advantech offers four different types of ITM-5115 to meet customer's demands: ITM-5115R-M (Standalone Monitor), ITM-5115R-C (Combined with ARK-1500 series becomes an all-in-one Computer), ITM-5115R-P (Plug-in design with ARK-1503P by 164-pin golden finger connection) and ITM-5115R-L (36-pin LVDS interface for the connection between ITM-5115R & ARK-1500 series).

1.2 Features

- 15" XGA LED backlight panel which provides 20~30% power saving
- -20° C ~ +60° C wide operating temperature support
- Special easy to clean design of 5-wire resistive plane touch window
- All new frame rail design provides a variety of connectors for peripheral devices
- Simple & elegant ID design with IP54 front panel protection
- Panel with BOX PC combination provides more flexibility for applications
- Stable Industrial grade rugged aluminum holder to adjust monitor angle
- Long time industrial component support

1.3 Applications

Application scenarios - self-service applications:

- KIOSK / POI machine
- Transportation machine
- Ticketing machine
- Financial ATM
- Entertainment / Gaming / Slot machine
- HMI (Human-Machine Interface) equipment controller monitor
- Public communication machine
- Public advertisement machine

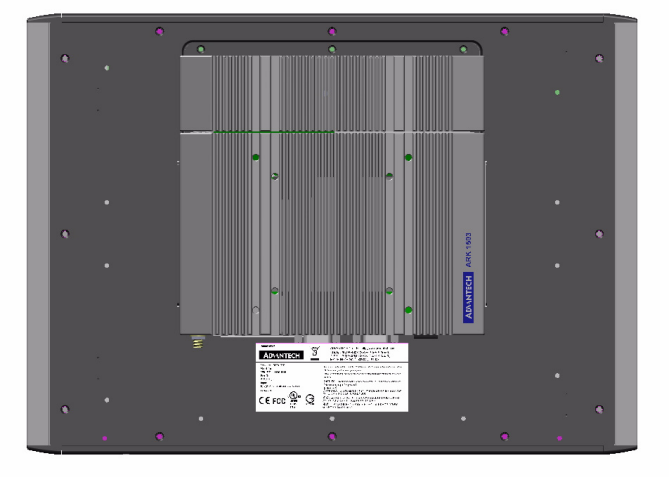
1.4 Product Photos

Front view

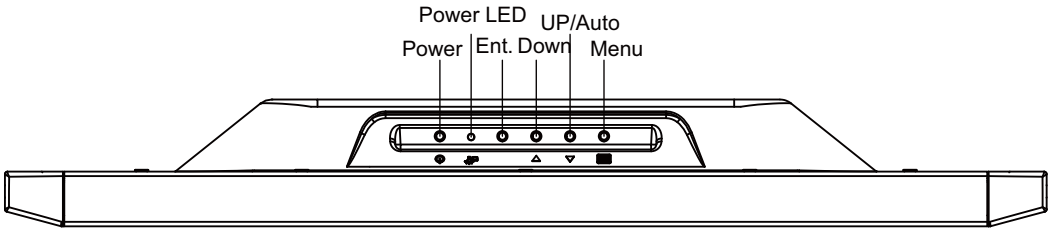
ITM-5115R-M series & ITM-5115R-L series rear view

ITM-5115R-C series rear view

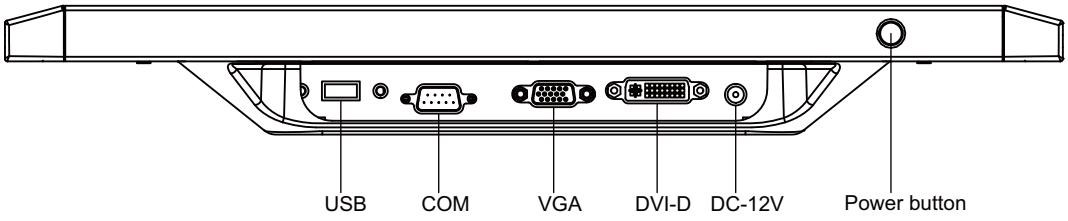
ITM-5115R-P series rear view



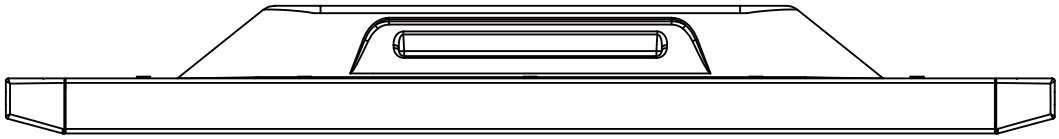
ITM-5115R M series top view



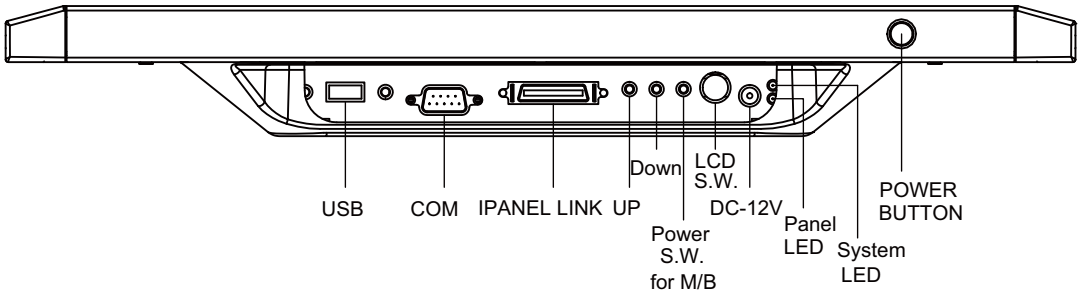
ITM-5115R M series bottom view



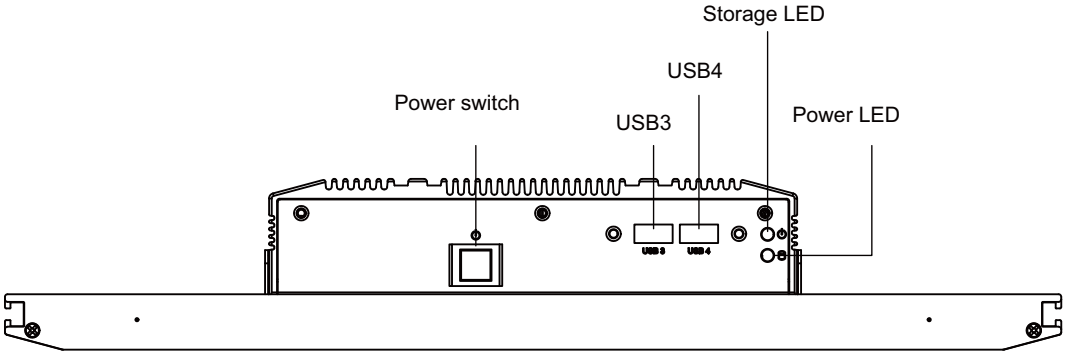
ITM-5115R L series top view



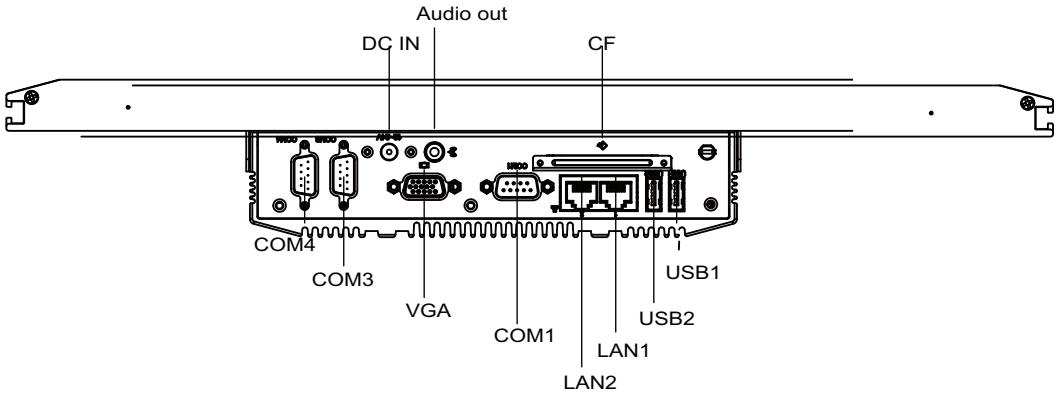
ITM-5115R L series bottom view



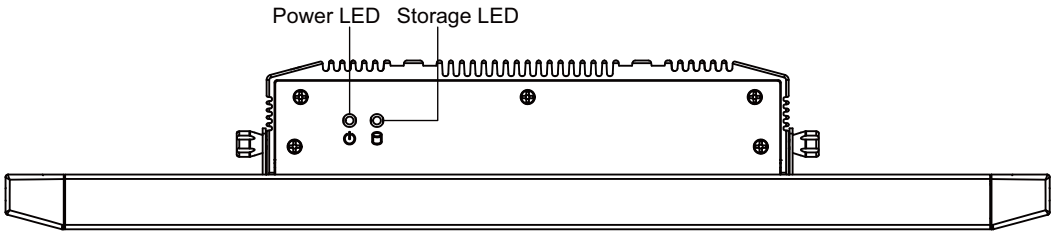
ITM-5115R C series top view



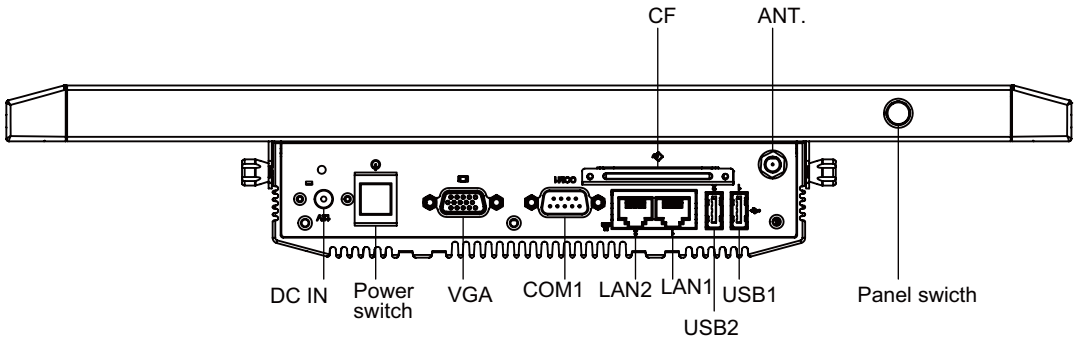
ITM-5115R C series bottom view



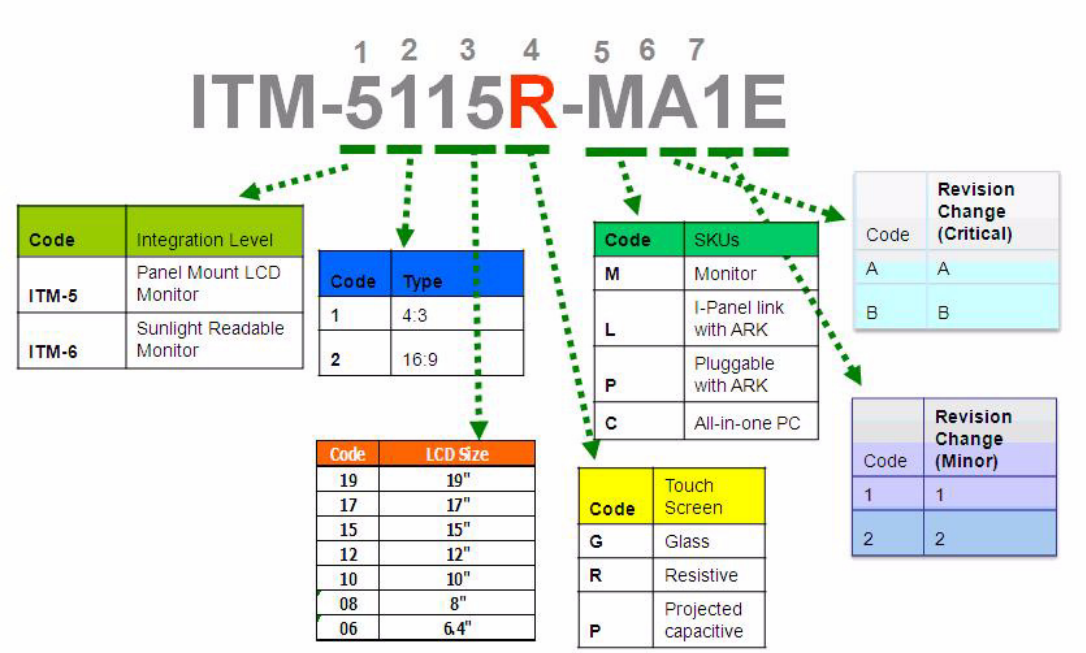
ITM-5115R P series top view



ITM-5115R P series bottom view



1.5 Naming Rule



Code	Integration Level
ITM-5	Panel Mount LCD Monitor
ITM-6	Sunlight Readable Monitor

Code	Type
1	4:3
2	16:9

Code	LCD Size
19	19"
17	17"
15	15"
12	12"
10	10"
08	8"
06	6.4"

Code	SKUs
M	Monitor
L	I-Panel link with ARK
P	Pluggable with ARK
C	All-in-one PC

Code	Touch Screen
G	Glass
R	Resistive
P	Projected capacitive

Code	Revision Change (Critical)
A	A
B	B

Code	Revision Change (Minor)
1	1
2	2

Chapter 2

System Setup

Sections include:

- Specifications
- Dimensions
- Panel Mount Assembling SOP
- Cable Clamp
- Accessory Packing

2.1 Specifications

Note! *The ITM-5115 series offers the following features and meets precise specifications.*

Unless otherwise noted, all the information listed below is subject to change without prior notification.

Display	Size	15“ LED backlight panel
	Resolution	1024 x 768 (XGA)
	Viewing Angle	80°/80°/80°/60°
	Brightness	400 (cd/m2)
	Support Color	16.2M / 262K colors
	Contrast Ratio	700
	Response Time	8 [msec]
	Lamp Life (hrs)	50,000 hrs
Touch	T/S Type	5-Wire Resistive Touch Window
	Surface Hardness	3 H
	Durability	36 millions times with a silicone rubber. Hit rate is by 250 g at 2 times per second.
Environment	Operating Temperature	-20 ~ + 60° C (-4~ 140° F)
	Storage Temperature	-30 ~ + 70° C (-22 ~ 158° F)
	Humidity	5 ~ 95% @ 40° C, non-condensing
	Shock	10G peak acceleration (11 ms duration)
	Front panel	IP54
System	IO (M series)	VGA x 1; DVI-D x 1; 12 DC Jack x 1; USB x1; RS-232X1 (USB & RS-232 are only for touch screen function)
	IO (L series)	I-Panel link x 1; USB x 1; COM x 1; 12 V_{DC} Jack x 1 (USB & RS-232 are reserved as the extension IO of PC, and RS-232 is Tx Rx only)
	IO (C series)	USB x 4, GbE x 2, RS-232 x 3, VGA x 1, CF card slot x 1, 12-24 V_{DC} Jack x 1, Audio line-out x 1
	IO (P series)	USB x 2, GbE x 2, RS-232 x1, VGA x 1, CF card slot x 1, 12 V_{DC} Jack x 1
	OSD (M series)	Keys: Menu, Up, Down, Signal switch (VGA/HMI), Power on/off
		Menu Functions: Brightness, Volume, Contrast, Clock Phase, Horizontal Position, Vertical Position and Sharp-ness
	OSD (L series)	Keys: Up, Down, Monitor Power on/off, PC Power on/off
	Power	60 W power adapter, with AC 100 ~ 240 V input and DC +12 V @ 5 A output
	EMC Compliance	CE/FCC/CCC/BSMI
	Safety	UL/CB/CCC /BSMI

2.2 Dimensions

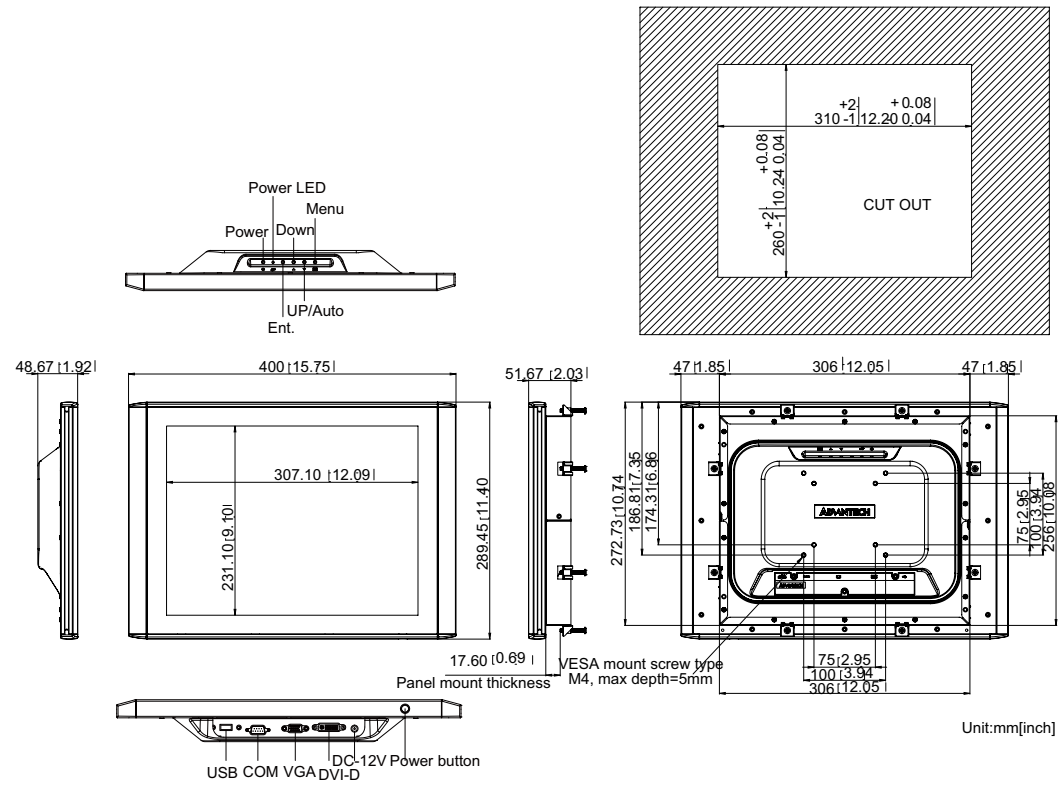


Figure 2.1 ITM-5115R M Series Dimensions

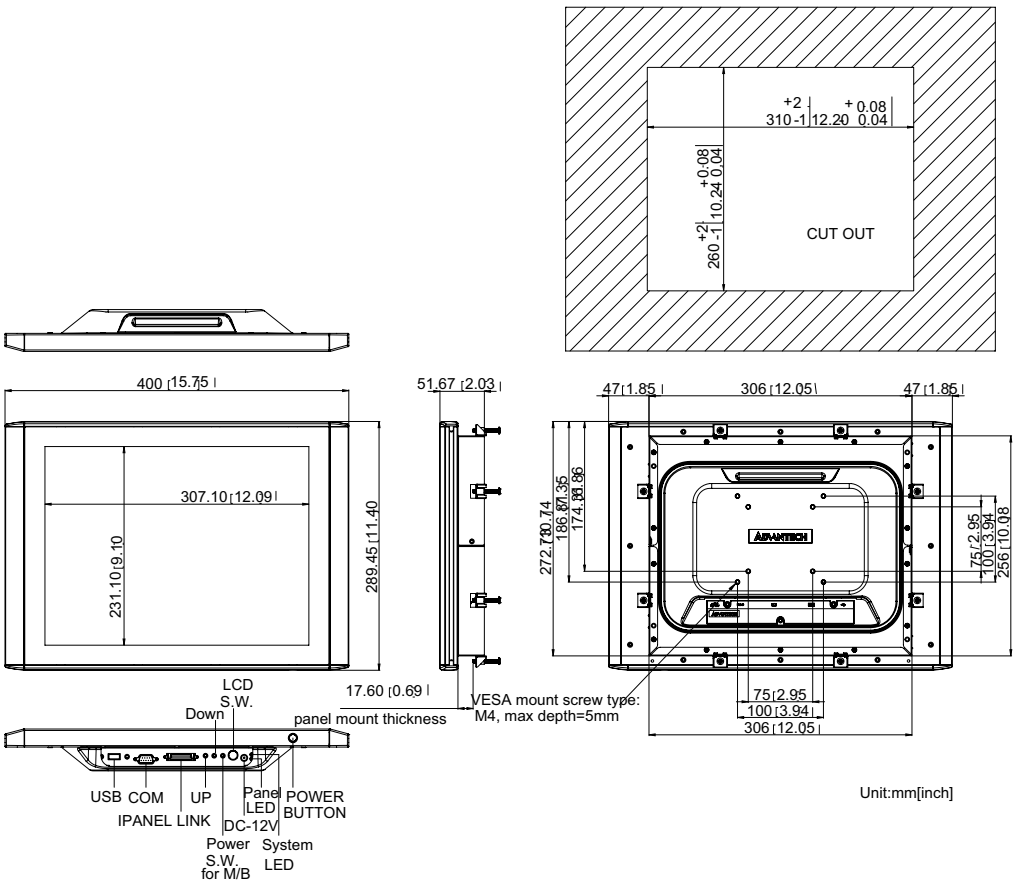


Figure 2.2 ITM-5115R L Series Dimensions

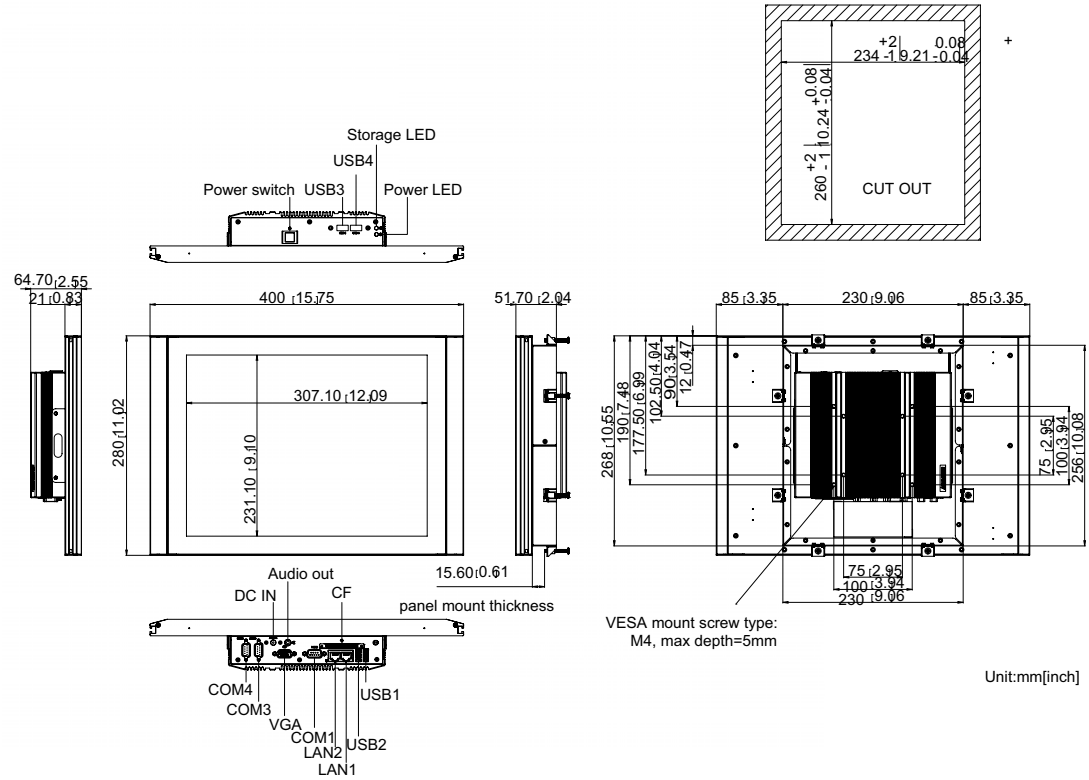


Figure 2.3 ITM-5115R C Series Dimensions

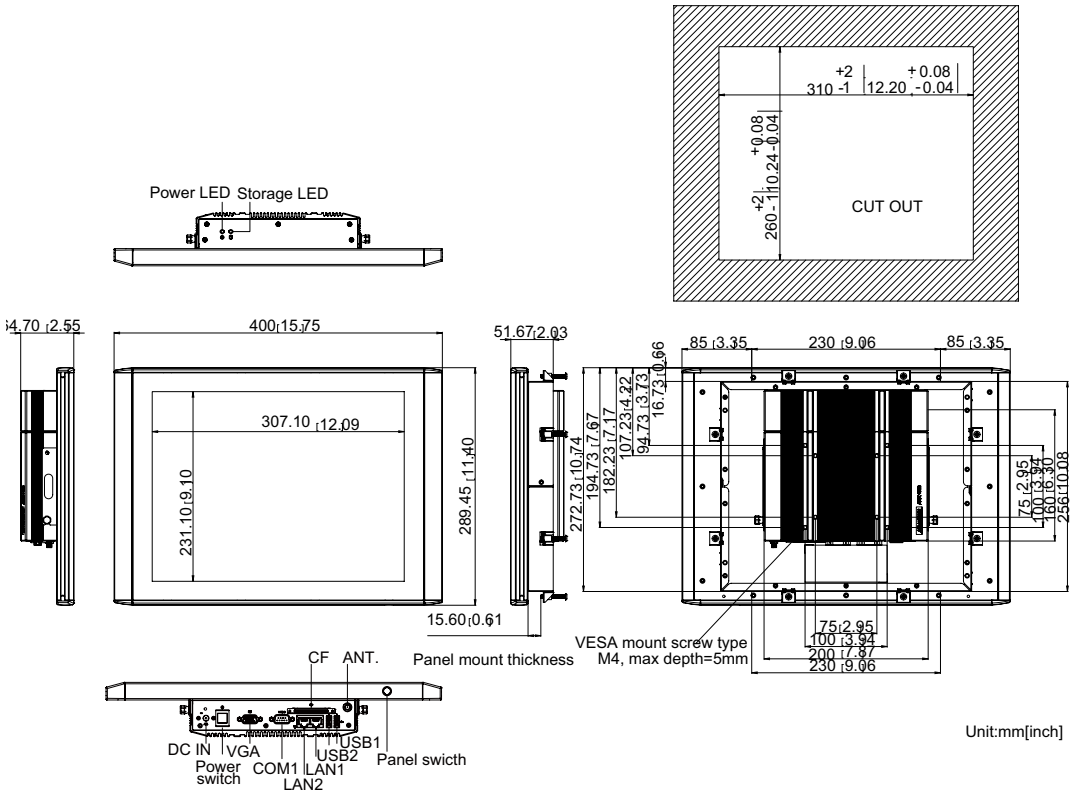
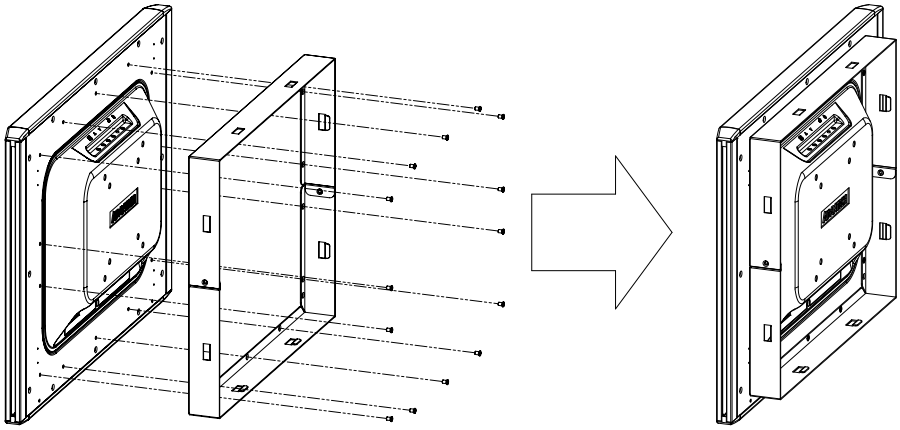


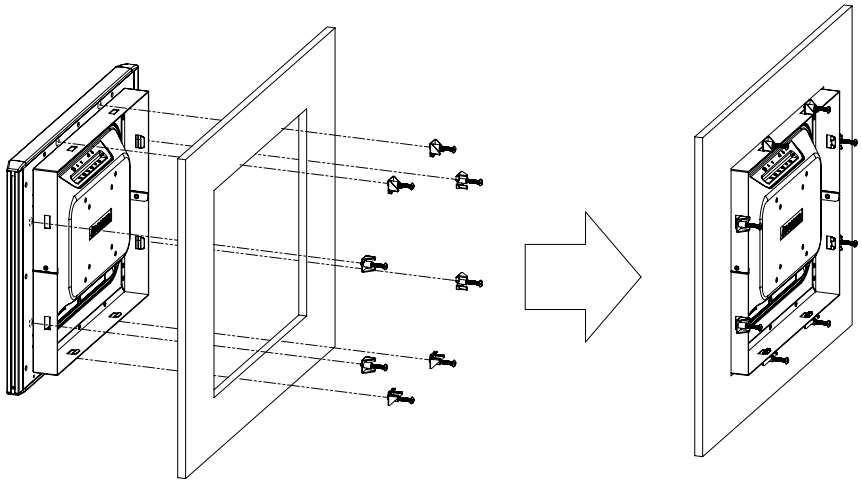
Figure 2.4 ITM-5115R P Series Dimensions

2.3 Panel Mount Assembly SOP

1. Using the screws (14 pcs) in the accessory box, attach them to the ITM-5115 as shown in the figure below.

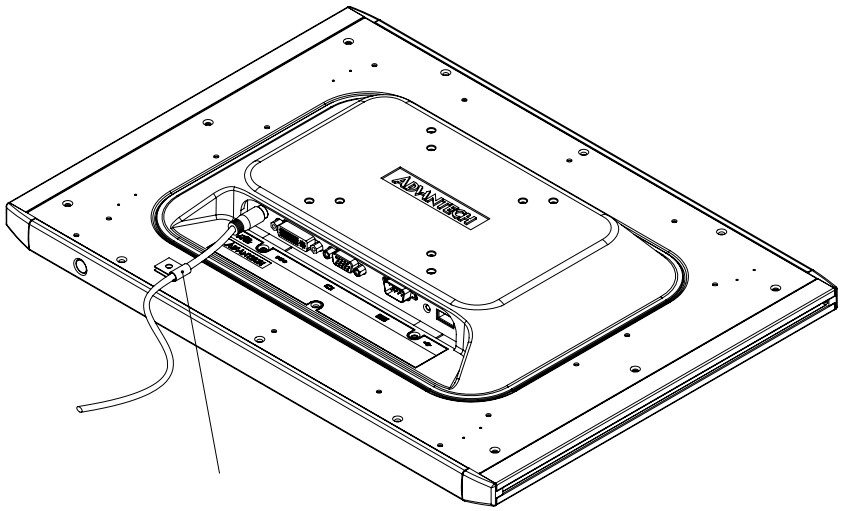


2. Then, to using the panel mount screws (8 pcs) (also in the accessory box), attach them to the ITM-5115 panel mount bracket.



2.4 Cable Clamp

A cable clamp also comes with ITM-5115 to fix the power cable, please refer to the drawing below.



Cable clamp

Packing List

- Panel-Mount clamper x 8
- Screw for panel-mount clamper M4_30L x 8
- Cable clamp x 1
- CD-ROM for ITM Series
- VGA cable 15P(M) 1.8 meter x 1
- USB-A(M)/USB-A(M) 180CM x 1
- IPanel Link Cable 3.0 meter x 1

Remark: IPanel Link cable is only included in ITM-5115R-L series
VGA cable is only included in ITM-5115R-M series

Note: The package contents are subject to change without prior notice.

Chapter 3

Touchscreen

Sections include:

- OSD Functions
- Touch Drivers

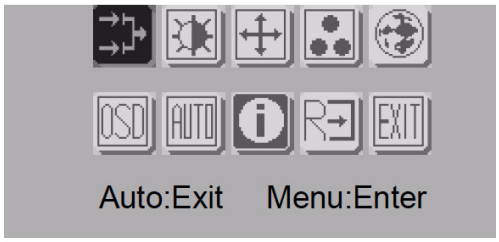
3.1 OSD Functions (ITM-5115R-M Series Only)

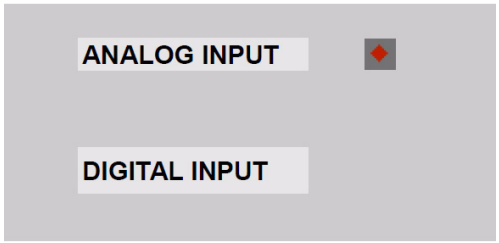
The OSD of the ITM-5115 display (1024 x 768 resolution) was selected to illustrate examples below:

Buttons	Description
Power	Turn the monitor power ON or OFF.
Menu/Exit	Activate the OSD menu. Exit menu
Auto/Left/Up	Automatically adjust the clock, phase, H-position and V-position. Move the selector to the next option. Increase the gauge value of the selected option.
Right/Down	Move the selector to the previous option. Decrease the gauge value of the selected option.
Select/Enter	Confirm the selected option. Enter menu.

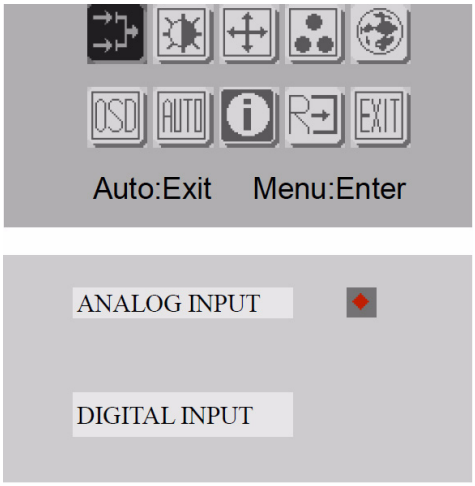
LED Function	
DPMS ON	Green
DPMS STANDBY	The green light is flashing
DPMS OFF	Red

3.1.1 OSD Main Menu: Push the MENU Key

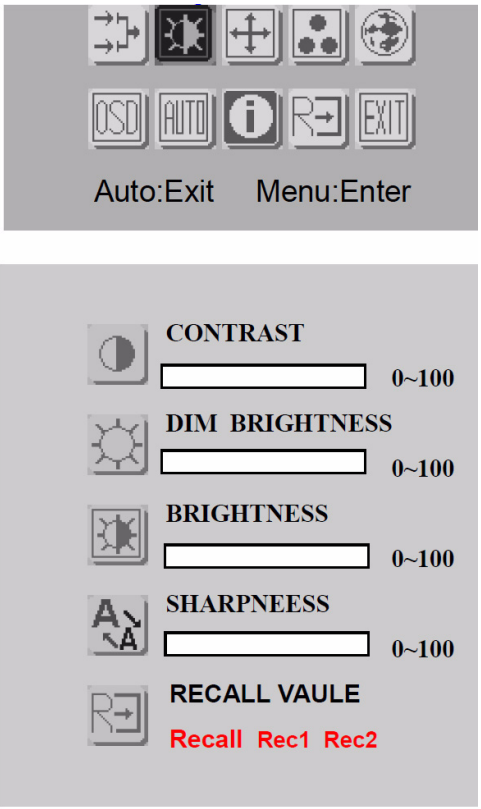




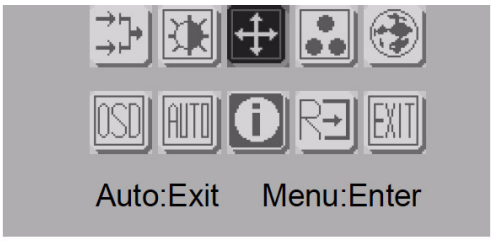
3.1.2 Select Input Source

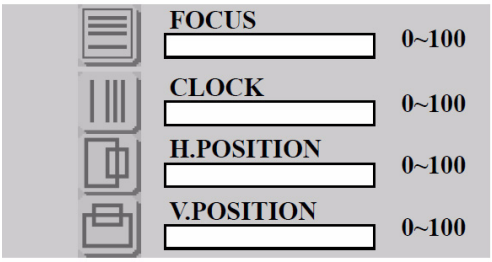


3.1.3 Contrast/Brightness - Submenu

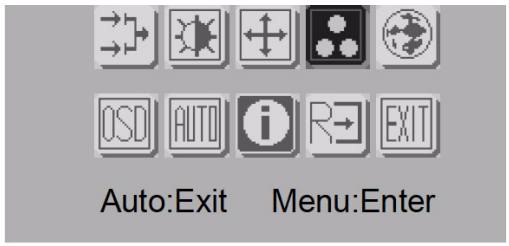


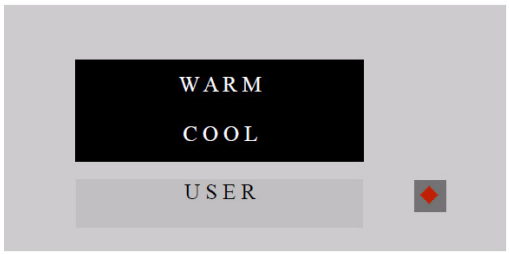
3.1.4 Geometry Menu



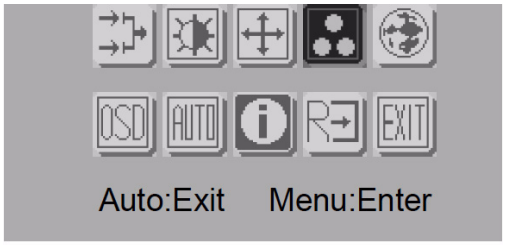


3.1.5 Color Temperature - Submenu

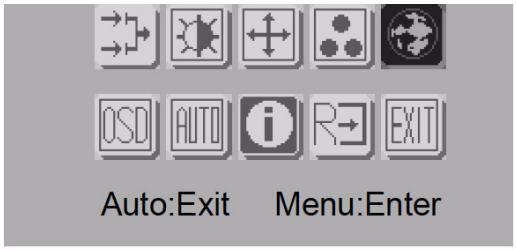


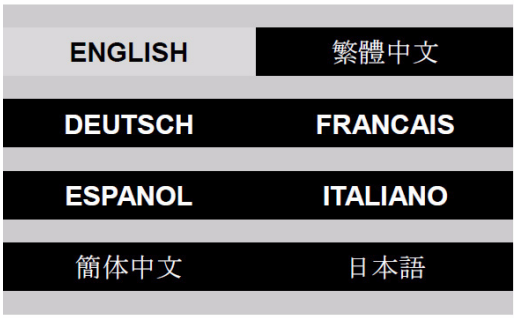


3.1.6 RGB Color - Submenu

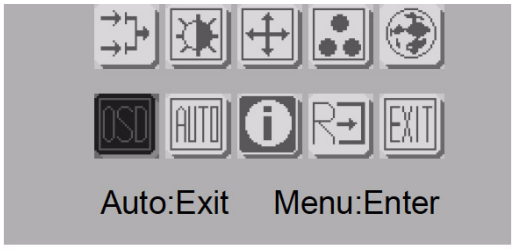


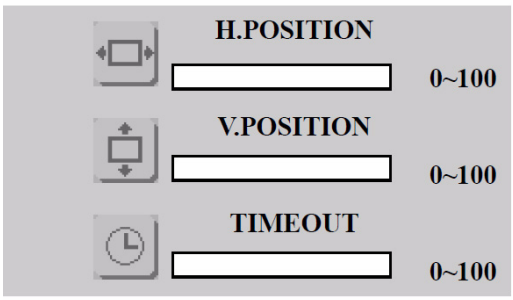
3.1.7 Language - Submenu



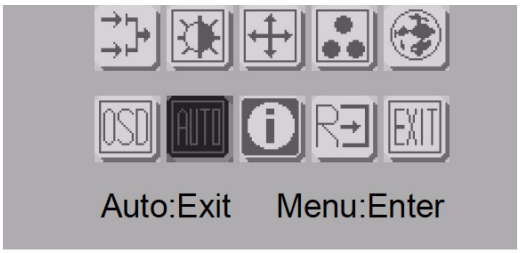


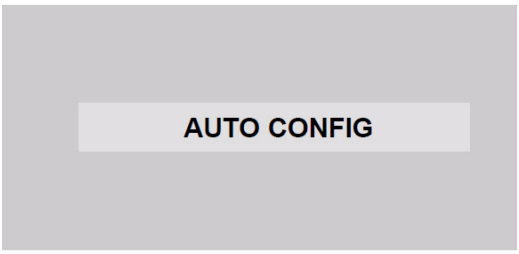
3.1.8 OSD Manager - Submenu



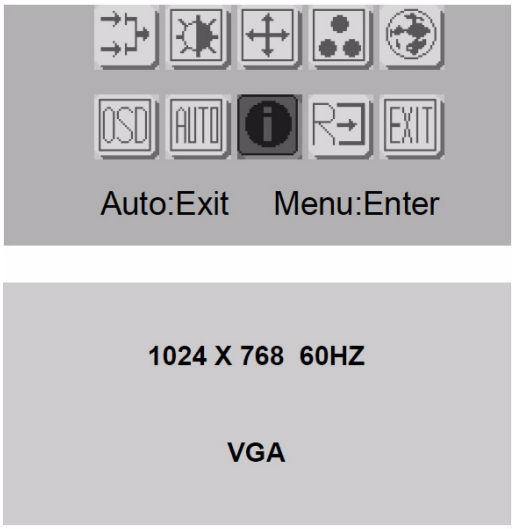


3.1.9 Auto Config - Submenu

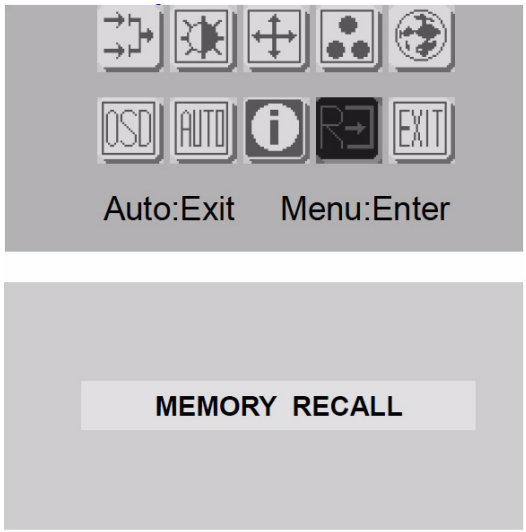




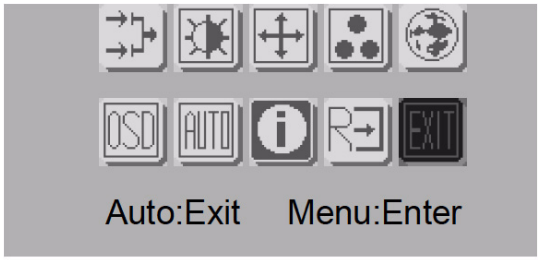
3.1.10 Mode Information - Submenu

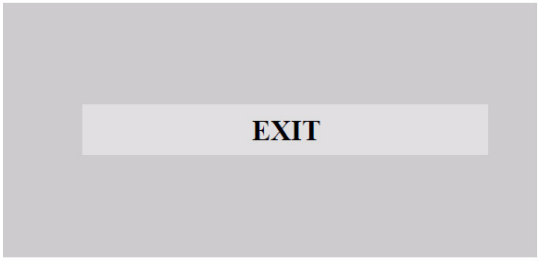


3.1.11 Memory Recall - Submenu

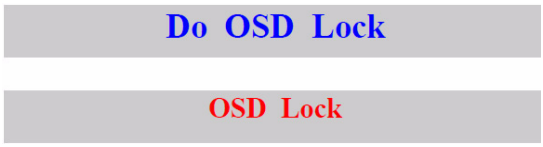


3.1.12 Exit Menu - Submenu

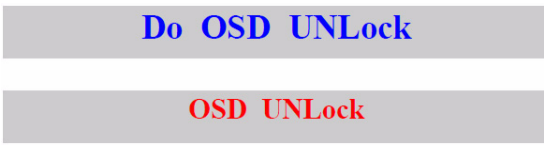




3.1.13 OSD Lock



At the same time, press the “Right” & “Left” keys to lock the key.



At the same time, press “Right” & “Left” keys to unlock the key.

3.2 Touch Drivers

The T/S driver CD-ROM is in the accessory box and comes with the product, and is also available online at the Advantech website as follows:

http://www.advantech.com/products/ITM-5115/mod_CE1CB5FE-192F-4B76-87DA-A1D01EB41889.aspx.

Appendix A

Troubleshooting

A.1 Introduction

If experiencing trouble with the monitor, or it fails to operate correctly, please refer to the following instructions before calling the Advantech service center. If unable to correct the faults using the instructions below, then please contact the distributor or the services/repair center.

A.2 Troubleshooting

No Images Appears On Screen

- Check to see that all the I/O and power connectors are installed correctly and connected. (Refer to 3.2, Connecting the Display)
- Make sure that none of the connectors are crooked, broken or loose.
- Make sure that the OSD power on the LED is turned on.
- Make sure that the brightness is not in the minumum.
- Make sure that the screen resolution is set to the correct setting for the type of LCD, and that the setting does not exceed the resolution specified for the particular model of LCD.

The image is incorrectly displayed, or the full screen image does not appear

- Please make sure the screen resolution on the motherboard is correct.

The position of screen is not in the center

- Adjust the H-position and V-position or perform “Auto-Tune”.

Out of range

- When the message “Out of Range” appears onscreen, it indicates that the signal of the computer is not compatible with the LCD display; i.e. the resolution exceeds the specified resolution for the LCD.
- Adjust the BIOS setting to match the correct resolution.

No signal

- The display is powered on, but can neither receive or display any signal from the computer. Check all power switches, power cables and VGA signal cables to ensure that all are connected correctly on both sides.

Going to sleep

- If the system goes to sleep, then the display has either been set to power-saving mode, or the display is experiencing a sudden signal disconnection problem. Check the BIOS system settings, and/or Windows configuration. Then check the connection of the power cable to computer on both sides.

ADVANTECH

Enabling an Intelligent Planet

www.advantech.com

Please verify specifications before quoting. This guide is intended for reference purposes only.

All product specifications are subject to change without notice.

No part of this publication may be reproduced in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission of the publisher.

All brand and product names are trademarks or registered trademarks of their respective companies.

© Advantech Co., Ltd. 2011